

## Olympic Region Environmental & Hydraulic Services Office

# ***Guidance for the Preparation of Hydraulic Documentation***

### **Hydraulic Reports**

- 1) Please note that there is no difference in the format or content of Types A and B Hydraulic Reports. The only difference is which office reviews and approves the report, based on type of project, as detailed in the Region Policy on Hydraulics.
- 2) Check Hydraulic Manual (HM), page 1-3, for items to be included.
- 3) The Hydraulic Report should be a stand alone document. It is included as part of the Stormwater Site Plan (SSP), which is the ‘umbrella’ document. The SSP may contain a hydraulic report or summary, a TESC Plan, a vegetation management plan, etc., depending upon the nature of the project. Chapter 5 of the Highway Runoff Manual describes the contents and preparation of a SSP.
- 4) All drainage **basins and sub-basins** should be described. The description should include the basin or sub-basin characteristics and how they were delineated. **Scaleable** plan sheets clearly outlining these basins and sub-basins should also be included. If basins were delineated with the use of contour maps, these maps should be included. If proposed basins or sub-basins are different from existing, they should also be shown.
- 5) The existing conditions narrative should describe the existing runoff conveyance and outfall (discharge) point for **all** stormwater on site. **Everything** described in the narrative should be shown on a plan sheet.
- 6) A downstream analysis should be completed for all outfalls if appropriate (see HRM for description of downstream analysis).
- 7) Existing condition calculations should be completed as appropriate and should also reference existing condition plan sheets (using the same notation listed on these sheets).
- 8) The proposed design narrative should account for all stormwater runoff. If some existing stormwater facilities are to remain in place, it would be indicated here. The narrative should also describe design criteria met and/or a discussion of why criteria was not met.
- 9) **All** proposed stormwater facilities should be clearly shown on plan sheets.

- 10) Proposed calculations should also reference plan sheets (using the same notation listed on these sheets).
- 11) If the computer program Waterworks™ is utilized as design software, **all inputs, selections, and assumptions should be listed (this would include pull down menu selections)**. A printout of final results should also be included. (Note: please include only meaningful printouts, do not include everything Waterworks will print).
- 12) Profile (elevation) information may be provided in many forms. Existing or proposed centerline profiles; Length and grade listed for pipes, ditches, swales, ponds, etc. on plan sheets; and Alignment or point profile printouts, etc. We only ask that the information be provided in an easy to understand format using the same notation as calculations.
- 13) Detail sheets as necessary.

Please note:

- a) In reference to all plan sheets described above, they may be combined as desired as long as all items are represented clearly.
- b) Olympic Region Materials will now provide maximum and design infiltration rates upon request. (These requests should be limited to stormwater treatment areas already located).
- c) The Hydraulic Report may contain mixed units as long as the appropriate conversions are performed when referencing plan sheets or other exhibits. The final design should be presented in Metric units to facilitate development of the PS&E.

Please use this guidance in conjunction with the criteria listed in the Olympic Region Policy on Hydraulics, Hydraulic Manual, and Highway Runoff Manual.

Specific guidance on Stormwater Site Plans and Temporary Erosion & Sediment Control Plans will follow.

9 November, 1998